

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the reasons that follow.

Claims 1, 6-8 and 12-15 have been amended.

A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Claims 1, 6-8 and 12-15 remain pending in this application.

Foreign priority

Applicant respectfully requests the Examiner to acknowledge applicant's claim to foreign priority and receipt of a certified copy of the corresponding foreign priority document by marking the appropriate boxes in the Office Action Summary in the next response.

Rejections under 35 U.S.C. § 103

Claims 1, 8 and 12-15 stand rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,914,754 to Kori et al. ("Kori"). Claims 6-7 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kori in view of U.S. Patent No. 5,323,235 to Tonomura et al. (hereafter "Tonomura"). Applicant respectfully traverses these rejections for at least the following reasons.

Independent claim 1 is directed to a picture convert apparatus that includes two processing units, a CPU (central processing unit) and an auxiliary processing unit. The apparatus decreases the processing load on the CPU by having the CPU and auxiliary processing unit share in the process of contracting a picture. Specifically, in claim 1 the processing by the CPU includes inputting a first picture data, producing a second picture data consisting of a first black area, a second black area and an area consisting of a reduced number of lines of the first picture, the reduced number of lines being half a number of lines of the first picture, and transferring the second picture data to a frame data buffer. The processing by the auxiliary processing unit includes inputting the second picture data from the frame data buffer and enlarging the second picture data to provide an enlarged picture, the

enlarged picture being enlarged $3/2$ times relative to the second picture data in the vertical direction. Because the amount of data transfer of the picture data transferred by the CPU to the frame data buffer is decreased, the load on the CPU in transferring the picture data to the frame data buffer is reduced (see present specification on page 11, lines 11-17).

In contrast to the presently claimed invention of claim 1, Kori does not suggest an apparatus with a CPU and auxiliary processing unit that share the picture contraction processing in the fashion recited in claim 1. Failing to disclose the structure of claim 1, Kori also fails to suggest the advantages of such structure in reducing the load on the CPU in the fashion of claim 1.

Kori also fails to disclose the processing as recited in claim 1. Claim 1 includes structure which inputs a first picture data, produces a second picture data consisting of a first black area, a second black area and an area consisting of a reduced number of lines of the first picture, where the area consisting of the reduced number of lines is sandwiched between the first black area and the second black area. The apparatus of claim 1 also includes structure which enlarges the second picture data to provide an enlarged picture, and which displays the enlarged picture. Kori does not disclose or suggest these features where second picture data is produced from first picture data to have an area with a reduced number of lines sandwiched between black areas, and then the second picture data is enlarged and displayed on a display.

In contrast to the processing performed by the structure of claim 1, Kori does not disclose the two steps of first producing second picture data from first picture data to have an area with a reduced number of lines sandwiched between black areas, and then enlarging the second picture data and displaying the enlarged data on a display. While Kori discloses displaying a video picture with upper and lower blank portions (See Figures 16a-16c, col. 1, lines 32-40), Kori does not disclose how this picture data that is displayed is derived. While Kori does not disclose what technique is used for displaying the 16:9 picture data on the 4:3 television display for Figures 16a-16c, it is entirely possible that Kori may use one of the conventional techniques disclosed in the present specification (see specification, page 1, line

15 to page 2, line 13, and Figure 8). In any event, Kori does not disclose the disclose the two steps of first producing second picture data from first picture data to have an area with a reduced number of lines sandwiched between black areas, and then enlarging the second picture data and displaying the enlarged data on a display.

Moreover, this two step technique provides data processing advantages not realized by either Kori or the conventional techniques. Specifically, this technique reduces the load on the CPU in processing (see present specification, page 3, lines 10-14, page 11, lines 8-17, for example). Such a reduction on the load in the CPU is not contemplated by Kori. When the present invention of claim 1 is considered as a whole, including its attendant advantages, claim 1 is clearly patentable over Kori.

Tonomura does not cure the deficiencies of Kori. Tonomura was cited for allegedly teaching an aspect ratio converting portion including a compression controller which determines the compression ratio. Tonomura, however, like Kori, fails to disclose either an apparatus with a CPU and auxiliary processing unit that share the picture contraction processing in the fashion recited in claim 1 or data processing where the second picture data is produced from first picture data to have an area with a reduced number of lines sandwiched between black areas, and then the second picture data is enlarged and displayed on a display. Thus, even if Tonomura and Kori were combined, the combination would not meet the limitations of claim 1.

Claims 8 and 15 are likewise patentable over Tonomura and Kori. Claim 8 is directed to a picture convert apparatus, and includes a CPU which produces a first black area, reduces the line number of a picture data to a predetermined line number, the predetermined line number being half the line number of the picture data, produces a second black area, forms the first black area, the reduced numbers of lines and the second black area to a frame and transfers the frame to a frame buffer, and an auxiliary processing unit which inputs the frame from the frame buffer and enlarges the frame, the enlarged frame being enlarged $3/2$ times relative to the frame in the vertical direction. Claim 15 is directed to a method for converting a first picture data to a second picture data, and comprises reducing the line number of the first picture data to a predetermined line number by the CPU, forming a first black area, the

reduced number of lines and a second black area to a frame by the CPU, transferring the frame to a frame buffer by the CPU, inputting the frame from the frame buffer by an auxiliary processing unit, and enlarging the frame by the auxiliary processing unit, the enlarged frame being enlarged $3/2$ times relative to the frame in the vertical direction. Thus, claims 8 and 15 are patentable over Tonomura and Kori for at least the same reasons as claim 1, discussed above.

For at least the above reasons, applicant submits that claims 1, 8 and 15 are patentable over Kori and Tonomura. Claims 6, 7, and 12-14 depend from one of claims 1 and 8 and are patentable for at least the same reasons, as well as for patentable features recited therein. Accordingly, applicant respectfully requests that the rejections under 35 U.S.C. 103 be withdrawn.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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